

**The Great Grid Upgrade**

Norwich to Tilbury

# Draft Outline Construction Traffic Management Plan

April 2024

**nationalgrid**

AENC-NG-ENG-PLN-0001

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# 1. Introduction

## 1.1 Summary

- 1.1.1 National Grid Electricity Transmission plc (here on referred to a National Grid) are producing an application for an order granting development consent to develop the transmission network between Norwich and Tilbury (referred to as the Project). The Project in its current form would be a Nationally Significant Infrastructure Project (NSIP), as defined under Part 3 of the Planning Act 2008. The Planning Act 2008 requires a Development Consent Order (DCO) to authorise the construction and operation of the Project.
- 1.1.2 As part of The Project, this Draft Outline Construction Traffic Management Plan (DOCTMP) has been prepared to support the Section 42 submission and will be submitted alongside a Preliminary Environmental Information Report (PEIR) This Outline CTMP will be adopted by the Main Works Contractor(s) appointed and will form the CTMP, a comprehensive and overarching management procedure which they will follow.
- 1.1.3 The Draft Outline CTMP details National Grid's proposals for minimising disruption to existing users on the public highway network and properties adjacent to it, for construction impacts. As agreed in the EIA Scoping Opinion, the operation and decommissioning impacts relating to traffic and transport have been scoped out.
- 1.1.4 The Draft Outline CTMP sets out the strategy and measures which will be adopted by National Grid and the Main Works Contractor(s), subject to agreement with the Local Highways Authorities and National Highways, in order to:
- Facilitate the Site Access Points and routes for the delivery of construction materials, equipment and movement of construction workers, along the Primary Access Routes (PAR).
  - Provide temporary access routes within the site working areas.
  - Manage the impacts arising from temporary road closures that are required for various stages of the Project, including the provision of diversion routes where appropriate.
  - Maintain communication with the local authorities and residents throughout construction activities.
  - Monitor the conditions of the highway's surfaces.

## 1.2 The Project

- 1.2.1 Current draft proposals for the Project, referred to as the 2024 draft alignment, which are the subject of the 2024 statutory consultation comprise:
- A new 400 kV electricity transmission connection of approximately 184 km overall length from Norwich Main Substation to Tilbury Substation via Bramford Substation comprising:
    - Approximately 159 km of new overhead line supported on approximately 510 steel lattice pylons (approximately 50 m in height) some of which are gantries (typically

up to 15 m in height) within proposed CSE compounds, or existing proposed substations

- Approximately 25 km of 400 kV underground cabling (some of which is located through the Dedham Vale National Landscape (an Area of Outstanding Natural Beauty AONB)).
- Six new CSE Compounds each with permanent access, to connect the overhead lines to the underground cables.
- A new 400 kV EACN substation, with a new permanent access, on the Tendring Peninsula. This is proposed to be an Air Insulated Switchgear (AIS) substation;
- Substation extension works at the existing Norwich Main, and Bramford Substations and works within the existing Tilbury Substation to connect and support operation of the new transmission connections.
- Temporary works associated with the construction of the Project.

1.2.2 An alternative design at the Waveney Valley (referred to as the Waveney Valley Alternative) is also being considered and is the subject of consultation and ongoing assessment. The design alternative, if taken forward, would result in changes to those elements of the Project set out below. This would comprise:

- Installation of approximately 157 km of new 400 kV overhead line
- Installation of approximately 27 km of 400 kV underground cabling (some of which is located through the Dedham Vale National Landscape (an AONB))
- Eight new CSE compounds (each with permanent access) to connect the overhead lines to the underground cables

1.2.3 All other works not listed above would be consistent with either alternative.

1.2.4 The Waveney Valley Alternative, if taken forward and based on the 2024 preferred draft alignment would compromise approximately 2 km less new 400 kV overhead line and approximately an additional 2km of 400kV underground cabling and two additional CSE compounds, each with a permanent access, to connect the overhead lines to the underground cables.

1.2.5 In addition, third party utilities diversions and/or modifications would also be required to facilitate the construction of the Project. There would also be land required for mitigation, compensation and enhancement of the environment including BNG.

1.2.6 As well as permanent infrastructure, land would also be required temporarily for construction activities including for example, working areas for construction equipment and machinery, site offices, welfare, storage and temporary construction access.

1.2.7 Further details on the Project are included within Chapter 4: Project Description of the PEIR.

## 1.3 Geographical and Regional Information

1.3.1 The 2024 preferred draft alignment passes through the counties of Norfolk, Suffolk and Essex (which includes Thurrock Council) in addition to rural villages along the proposed corridor, the proposed alignment is in proximity of a number of towns and cities, including:

- Norwich
- Manningtree

- Diss
- Stowmarket
- Needham Market
- Ipswich
- Hadleigh
- Colchester
- Coggeshall
- Witham
- Braintree
- Chelmsford

1.3.2 The existing road network for the region comprises a number of major roads between the large population centres, with smaller settlements and rural areas being serviced by a network of rural roads.

## 1.4 Purpose of the CTMP

1.4.1 The purpose of the CTMP is to outline the approach to managing construction traffic, impacts on both the Local Road Network (LRN), Major Road Network (MRN) and Strategic Road Network (SRN) (referenced in Section 5.1) during works to roads and public access, for example during the construction of pylons and haul roads. The appointed Main Works Contractor(s) will be responsible for implementing the measures outlined in the CTMP.

1.4.2 Construction phase measures relevant to traffic and transport are secured within this CTMP and provided within Appendix 4.1: Draft Outline Code of Construction Practice (CoCP), in Volume III of the PEIR. A number of additional documents and plans are submitted alongside this DOCTMP for the Section 42 submission.

- Preliminary Environmental Information Report (PEIR) includes the assessment of the proposed residual construction effects throughout the construction programme and associated mitigation.
- Draft Outline Code of Construction Practice (CoCP): Embedded, standard and additional mitigation measures, including standard approaches and actions to be implemented on construction sites, intended to reduce or avoid effects on the environment. They are general or topic specific but are typically available across the whole project. The embedded, standard and additional measures are provided in full in the Appendix 4.1: Draft Outline Code of Construction Practice (CoCP) in Volume III of the PEIR.
- Construction Access Plans: These plans detail the routes and access options to be used by construction vehicles. These plans are referenced throughout the Draft Outline CTMP, where required. These are included within drawings AENC-NG-ENG-PLN-0022 to 0030.

1.4.3 The above documents are referenced in the Draft Outline CTMP where appropriate.

## 1.5 River Stour and River Waveney

1.5.1 The River Stour is navigable within the draft Order Limits. Unpowered craft (i.e. those that are paddled, rowed or sailed) are permitted to travel the whole length of the Stour Navigation, from Brundon Mill (Sudbury) to Cattawade (on the Stour Estuary). Powered craft, with certain specified exceptions, such as the River Stour Trust trip boats, are restricted to the stretch between Ballingdon Bridge (Sudbury) and Henny Street. The Environment Agency is the navigation authority for this section of the river.

1.5.2 The River Waveney is not navigable within the draft Order Limits (whether the overhead line project is taken forward or if the Waveney Valley Alternative is progressed). The

River Waveney is currently navigable between Geldeston Lock (Beccles) to the River Yare (Great Yarmouth).

- 1.5.3 The underground cables will need to cross underneath the River Stour and River Waveney. The underground cables will cross the River Stour and River Waveney using a trenchless construction method.
- 1.5.4 Due to the absence of effects on the River Stour and River Waveney, the Draft Outline CTMP does not include further details in relation to the river.
- 1.5.5 Neither of the waterways, which intersect the project alignment are considered feasible at this stage of project development, to use as construction routes.

## 1.6 Process of the CTMP

- 1.6.1 This Draft Outline CTMP (DOCTMP) is the initial CTMP submitted as part of the Project. As the Project develops, the CTMP will be reviewed and amended based on the stages below:
  - Draft Outline CTMP: Submitted at Section 42. Reviewed and commented on by Stakeholders and Local Highway authorities.
  - Outline CTMP: Submitted at DCO stage. This will incorporate comments from the Local Highway Authorities and stakeholders where appropriate, and reflect additional project information.
  - CTMP: Adopted and developed by the Main Works Contractor(s) on the Project post DCO Changes will be made in consultation with the relevant Local Highway Authority.

## 1.7 Structure of the CTMP

- 1.7.1 The CTMP structure is set out in Table 1.1.

Table 1.1 – Structure of the CTMP

| Chapter                                | Content  |
|--|--|
| Introduction                           | This sets out the purpose of the CTMP and how it is structured.  |
| Project Overview                       | This references the construction schedule, working hours and the consents, licences and permits anticipated to be used for some aspects covered within the CTMP.   |
| Project Team, Roles and Responsibility | This sets out the roles and responsibilities relevant to the CTMP and the training and awareness that will be completed.   |
| Engagement of the CTMP                 | This section summarises the engagement on the CTMP at this stage of the Project.   |
| Road Network                           | This describes the road network potentially affected by the Project during construction. It describes the measures to reduce effects from works to the road network, such as the installation of Site Access Points or how the transmission line will cross the road network. It also describes measures to reduce the potential effects on the road network from the additional vehicles generated during construction. |

**Chapter****Content**

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Implementation

This section sets out the site checks that are anticipated to be undertaken to monitor compliance of the CTMP during construction. It also outlines the change process.

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## 2. Project Overview

### 2.1 Project Commitments

- 2.1.1 The Project design is the result of a process of iterative design development that was introduced at project inception. Environmental considerations have had a key influence on the Project.
- 2.1.2 The embedded, standard and additional mitigation measures and that are proposed by National Grid that are relevant to the road network and Public Rights of Way (PRoW) network are primarily included within Appendix 4.1: Draft Outline Code of Construction Practice (CoCP) in Volume III of the PEIR and referenced throughout this document.

### 2.2 Construction Schedule

- 2.2.1 In common with other Nationally Significant Infrastructure Projects (NSIP), the detailed construction programme will be subject to change from factors such as procurement, system access requirements (outages), resource and material availability, weather and ground conditions.
- 2.2.2 The construction schedule will be included within the stage plan submitted to the relevant planning authorities, prior to commencement.
- 2.2.3 Construction activities will be sequenced along the linear construction site. There are likely to be a number of construction activities running concurrently on the Project.
- 2.2.4 Due to the nature of works, and as some aspects need to take place during agreed outage windows, some Haul Roads and temporary fencing may need to remain on site until after testing has been completed to allow any snagging matters to be addressed before reinstatement takes place. The schedule of works will be communicated with local communities (via newsletters) and they will be updated on amendments to the schedule during construction.

### 2.3 Working Hours

- 2.3.1 It is assumed that the core working hours for construction would be:
- Monday to Friday 07:00-19:00
  - Saturday, Sunday and Public Holidays 08:00-17:00
- 2.3.2 The following typical operations or similar works may take place outside of the proposed core working hours referred to in 2.3.1. Some examples of such works include:
- The jointing of underground cables, with the exception of cable cutting which would only take place during the core working hours.
  - The installation and removal of conductors, pilot wires and associated protection across highways, railway lines or watercourses.
  - The completion of operations commenced during the core working hours which cannot safely be stopped.

- Any highway works requested by the relevant highways authority as necessary to be undertaken outside of core working hours (where possible).
- Oil processing of transformers or reactors in substation sites.
- The testing or commissioning of any electrical plant installed as part of the authorised development.
- The completion of works delayed or held up by severe weather conditions which disrupted or interrupted normal construction activities.
- Security monitoring and surveys.
- Trenchless crossing operations.
- Deliveries of abnormal indivisible loads (AILs), for example the cable drums which may be outside core working hours.
- Large concrete pours that cannot be reasonably complete within core working hours.

## 2.4 Consents, Licences and Permits

### Traffic Regulation Orders

2.4.1 Traffic Regulation Orders (TRO) and Temporary Traffic Regulation Orders (TTROs) will be required for regulating traffic on roads and PRowS in proximity to the Project, including if a street needs to be closed or diverted temporarily during construction. This could include:

- Temporary speed limits
- On street parking restrictions
- Road closure
- Temporary traffic lights
- Other works on the public highway

2.4.2 Other licences and permits may be required, where necessary.

# 3. Project Team Roles and Responsibilities

## 3.1 Project Responsibilities

- 3.1.1 The Main Works Contractor(s) will undertake the construction work in accordance with the DCO and its associated documents within this Draft Outline CTMP. The relevant aspects of this DOCTMP will be notified to the workforce at commencement of works to highlight the relevant commitments and responsibilities to those undertaking the work.
- 3.1.2 Overall roles and responsibilities relevant to the CTMP are presented in Table 3.1. National Grid are overall responsible for the enforcement of the CTMP, with the appointed Main Works Contractor(s) adopting the Outline CTMP. The CTMP will be managed and enforced by the roles as set out in Table 3.1.

Table 3.1 –CTMP Roles and Responsibilities

| Role                                  | Organisation                           | Responsibilities  |
|---------------------------------------|--|---|
| Environmental Managers                | Main Works Contractor(s)               | The Environmental Manager will be responsible for the maintenance of all environmental plans and registers, including monitoring that the environmental measures and mitigation are implemented on site and as recorded within the CTMP. It is assumed that they will be the main point of contact for all environmental matters on the Project. They will also develop good working relationships with external stakeholders such as the relevant highway authorities.   |
| Environmental Clerk of Work (EnvCoW)s | National Grid/Main Works Contractor(s) | The EnvCoW will monitor that the works proceed in accordance with relevant environmental DCO requirements and adhere to the required mitigation measures. The EnvCoW will be supported as necessary by appropriate technical specialist advisors. The EnvCoW will also draw on the experience of the technical specialists who will advise in specific areas, for example the arboriculturist will advise on tree works that are required near to new Site Access Points. |
| Permits and Consent Managers          | Main Works Contractor(s)               | The Permits and Consents Manager will work with the Environmental Manager to draft and submit permits and consents on behalf of the Project, track the progress, provide updates and communicate approvals.   |
| Works Supervisors                     | Main Works Contractor(s)               | The Works Supervisor will be responsible for delivering the site works in accordance with the requirements of the CTMP and implementing good environmental practices required by the Environmental Manager. They are responsible for managing operatives, plant and their areas of work in accordance with the principles of good environmental practice.   |

| <b>Role</b>                   | <b>Organisation</b>                     | <b>Responsibilities</b>   |
|-------------------------------|---|---|
| Technical Specialist advisors | Main Works Contractor(s)/ National Grid | These will have the relevant experience to supervise the relevant aspects of the works, which might include an arboriculturist, land contamination specialist, soil specialist, ecologist, archaeologist. |

### **3.2 Information Training and Awareness**

3.2.1 In accordance with the measures GG05 and TT08 in Appendix 4.1: Draft Outline Code of Construction Practice (CoCP) in Volume III of the PEIR, training will be provided to staff on site regarding environmental and site concerns. Additional details of the proposed information and training available to staff and operatives on the Project will be included within the CTMP submitted at DCO stage.

### **3.3 Community Engagement and Public Information**

3.3.1 Information and detail on the level of community engagement and public information will be included in a later revision of the Outline CTMP at DCO Stage.

3.3.2 The community engagement and public information is likely to include the following:

- Newsletters tailored to the specific area and reflecting the works to be carried out and the duration of the works.
- The name and contact details for the project displayed at the entrance to the main site compound.
- A free telephone project helpline and project website.
- Processing of feedback.

# 4. Engagement on the CTMP

## 4.1 Introduction

4.1.1 This chapter sets out the current and future engagement to be undertaken on the CTMP and how the comments are planned to be considered when developing the Outline CTMP for submission with the application.

## 4.2 Engagement

4.2.1 Initial discussion on the CTMP and its contents have been held between National Grid, National Highways and Local Highway Authorities to seek feedback on the contents and structure before producing the DOCTMP. The discussions were held with:

- Thurrock Council
- Essex County Council
- Suffolk County Council
- Norfolk County Council
- National Highways.

4.2.2 On submission of the DOCTMP, this will be issued to the organisations listed above for comments in their role as relevant highways authority on the Project.

4.2.3 A summary of discussions held with relevant consultees, where the CTMP was discussed, is shown in Table 4.1.

Table 4.1 – CTMP Stakeholder Engagement

| <b>Organisation and Date</b>  | <b>Summary of Issues Raised</b>  | <b>Project Response and consideration in CTMP</b>   |
|---|--|---|
| Local Highway Authority Thematic Group Meeting (Essex, Norfolk, Suffolk, and Thurrock), July 2022 | Local Highway Authorities confirmed their comments raised at non-statutory consultation. This included considering cumulative effects, abnormal indivisible loads (AIL) routes, agreement on the sensitivity of roads/area, commitments for effects resulting from operation and decommissioning, and appropriate mitigation measures. | <ul style="list-style-type: none"><li>• An Outline Construction Traffic Management Plan (CTMP) will be prepared, to support the application for DCO to include traffic control and mitigation measures. A DOCTMP accompanies the statutory consultation.</li><li>• The Outline CTMP submitted with the DCO application will identify the need and strategy for AILs movements for construction mitigation. The Outline CTMP will reference the routes that have been discussed with the highway authorities.</li><li>• The assessment of traffic and transport effects during operation (and maintenance) and decommissioning has been scoped out of the ES (and this PEIR)</li></ul> |

| Organisation and Date   | Summary of Issues Raised   | Project Response and consideration in CTMP  |
|---|--|---|
| Local Highway Authority Thematic Group Meeting, August 2023                         | Local Highway Authorities requested an early agreement on link sensitivity, traffic counts, AILs, compounds and data and underlying assumptions behind traffic and workforce calculations.   | as per the Scoping Opinion (Planning Inspectorate, 2022).<br><br>• The Outline CTMP will include details of AIL mitigation that a schedule of movements will be utilised and routes/mitigation will be agreed with the relevant highway authority.  |
| Transport Working Group Regional Meeting, September 2023                            | Meetings were held with Suffolk, Essex, Norfolk and Thurrock County Councils. A review of the Primary Access Routes (PARs) were undertaken and areas of concerned were highlighted.  | <ul style="list-style-type: none"> <li>• Areas of concern noted along the primary construction route and have been taken into consideration, the Outline CTMP will detail the mitigation for construction vehicles.</li> <li>• The Draft Outline CTMP refers to the Primary Access Routes and Haul Roads, which have been presented to local authorities, areas noted for further discussion.</li> </ul>  |
| Transport Working Group Meeting (Norfolk, Essex, Suffolk and Thurrock) January 2024 | <p>Meetings held with Norfolk, Essex, Suffolk and Thurrock to discuss the CTMP at drafting stage.</p> <p>Local Highway Authorities provided high level feedback on proposed CTMP structure and content, including lessons learned from previous projects. Feedback has been recorded for consideration throughout the development of the CTMP, including:</p> <ul style="list-style-type: none"> <li>• Pre and post construction condition surveys and any remedial measures to be agreed with Local Highway Authority.</li> <li>• Additional consideration given to working hours.</li> <li>• Consideration for the process that the CTMP will follow before being applicable, including</li> </ul> | <p>The Draft Outline CTMP refers to:</p> <ul style="list-style-type: none"> <li>• Pre and post construction condition surveys and any remedial measures to be agreed with Local Highway Authority.</li> <li>• Details on the Core working hours, and the permitted activities which can occur outside of these hours.</li> <li>• Details on the process that the development of the CTMP will follow till post DCO, and the Local Highway Authority and Local Street Authority input into the variations of the CTMP.</li> <li>• Details on the process for recording activity against the mitigation measures and the compliance procedure.</li> </ul> |

| Organisation and Date | Summary of Issues Raised  | Project Response and consideration in CTMP |
|-----------------------|---|--|
|                       | <p>reviews by stakeholders and local authorities.</p> <ul style="list-style-type: none"> <li>● Any variations to the CTMP must seek prior agreement with the relevant Local Highway Authority and the Local Street Authority.</li> <li>● Request to manage closures to not be in excess of time required.</li> <li>● Request for measures in place to monitor assumptions.</li> </ul> |  |

# 5. Road Network

## 5.1 Introduction and Terminology

5.1.1 This section sets out the pre-construction surveys and embedded, standard and additional mitigation measures that are anticipated to be implemented in relation to the road network. It considers potential impacts caused by proposed works to the road network, for example, creating Site Access Points for access to the working area and works where the proposed transmission line is anticipated to cross the highway. It also includes impacts that may be caused by the additional traffic that will be generated during the construction phase of the Project.

5.1.2 The following terminology is used to describe construction routes:

- Strategic Road Network (SRN): Comprises the motorway and trunk road network, managed by National Highways, as defined by the Department for Transport.
- Major Road Network (MRN): Routes between major settlements and ports/airports across Great Britain. The entirety of the strategic route network forms part of the Primary Route Network, as defined by the Department for Transport, this is managed by the Local Highway Authorities. For the Project, the Local Highway Authorities are Thurrock, Essex, Suffolk and Norfolk County Councils.
- Local Road Network (LRN): Comprising the local roads managed by relevant Local Highway Authorities.
- Primary Access Routes (PARs): An access route designated for use by construction vehicles along the LRN (typically for Heavy Goods Vehicles (HGVs)) to travel from the SRN to the Site Access Point. These form a wider Access Route Strategy, discussed in Section 5.4.
- Secondary Access Routes (SARs): Access Routes which will be considered for specific movements of light vehicles (cars and vans) only moving between adjacent haul road sections, where the haul road is not continuous due to a river, main road, railway or other obstruction.
- Haul Road: Temporary roads provided outside of the existing Public Highway. These routes will be managed by National Grid and link the Site Access Point to the working areas.
- Site Access Point: The location on a Primary Access Route where construction vehicles will transition between the LRN and Haul Roads/Working Areas.
- Access Tracks: Temporary access to a smaller scale, isolated works area, typically provided for erection of scaffold and netting at locations the overhead line crosses features such as roads and railways.
- Crossover Points: Locations where Haul Roads cross the LRN, but are not generally proposed for Construction HGVs to transition to or from the LRN.
- Site Compounds: The proposed locations provided for the overhead line, underground cabling, CSE compounds and substations compounds.

## 5.2 Pre-Construction Surveys

- 5.2.1 Pre-construction assessment including highway structures will be undertaken on the routes which are anticipated to be used by Abnormal Indivisible Loads (AILs). The routing of AILs will be included within the Outline CTMP.
- 5.2.2 Pre and post construction condition surveys will be undertaken on AIL and HGV routes, including minor roads. The scope and methodology of these surveys will be agreed with each Local Highway Authority.
- 5.2.3 In accordance with mitigation measure GG06 in Appendix 4.1: Draft Outline Code of Construction Practice (CoCP) in Volume III of the PEIR, a record of condition will be carried out (photographic and descriptive) of the working areas that may be affected by construction activities. This record will be available for comparison following reinstatement after the works have been completed to enable the standard of reinstatement to meet the condition in the pre-condition survey.

## 5.3 Vehicle Classification

- 5.3.1 The design vehicles assessed as the most onerous movement anticipated for each National Grid Asset category are summarised below. These vehicles have been used as the basis of assessment for PARs, with consideration to the relevant works types proposed to be accessed from the associated Haul Road. Table 5.1 details the most onerous vehicles considered in the access assessments per PAR, and the assumed infrastructure they will be providing construction access to, based on the preferred draft alignment.

Table 5.1 –Vehicles per PAR

| PAR     | Section (s) | Road Access | Tower Numbers | Cabling | Substation/ CSEC   | Cabling Compound | Yard/Compound | Standard Vehicles | Most onerous anticipated AIL/Special Order Vehicles   |
|---------|-------------|-------------|---------------|---------|--------------------|------------------|---------------|-------------------|---|
| H01-A1  | A           | A140        | RG: 1-12      |         | Norwich Substation | RG-CC01          |               | HGVs              | Large Mobile Crane (250t)<br>Transformer Delivery AIL |
| H01-A2  | A           | B1135       | RG: 13-24     |         |                    |                  |               | HGVs              | Large Mobile Crane (250t)                             |
| H02-A1  | A           | B1135       | RG: 25-28     |         |                    |                  |               | HGVs              | Large Mobile Crane (250t)                             |
| H03-A1  | A           | B1135       | RG: 29-42     |         |                    |                  |               | HGVs              | Large Mobile Crane (250t)                             |
| H03-A2  | A           | B1134       | RG: 43-57     |         |                    |                  | RG-Sate1      | HGVs              | Large Mobile Crane (250t)                             |
| H04-A1  | A           | B1134       | RG: 58-70     |         |                    |                  |               | HGVs              | Large Mobile Crane (250t)                             |
| H04-A2* | A           | A1066       | RG: 71-83     |         |                    |                  |               | HGVs              | Large Mobile Crane (250t)                             |
| H05-A1* | A           | A1066       | RG: 84-88     |         |                    |                  |               | HGVs              | Large Mobile Crane (250t)                             |
| H05-A2  | B           | A143        | RG: 89-95     |         |                    |                  |               | HGVs              | Large Mobile Crane (250t)                             |

| PAR    | Section (s) | Road Access   | Tower Numbers | Cabling | Substation/ CSEC    | Cabling Compound | Yard/Compound | Standard Vehicles | Most onerous anticipated AIL/Special Order Vehicles   |
|--------|-------------|---------------|---------------|---------|---------------------|------------------|---------------|-------------------|---|
| H06-A1 | B           | A143          | RG: 96-109    |         |                     |                  | RG-Main       | HGVs              | Large Mobile Crane (250t)                             |
| H06-A2 | B           | B1113         | RG: 110-123   |         |                     |                  |               | HGVs              | Large Mobile Crane (250t)                             |
| H07-A1 | B           | B1113         | RG: 124-137   |         |                     |                  |               | HGVs              | Large Mobile Crane (250t)                             |
| H07-A2 | B           | A1120         | RG: 138-152   |         |                     |                  |               | HGVs              | Large Mobile Crane (250t)                             |
| H08-A1 | B           | A1120         | RG: 153-160   |         |                     |                  | RG-Sate2      | HGVs              | Large Mobile Crane (250t)                             |
| H09-A1 | B           | A1120         | RG: 161-164   |         |                     |                  |               | HGVs              | Large Mobile Crane (250t)                             |
| H10-A1 | B           | A1120         | RG: 165-187   |         |                     |                  |               | HGVs              | Large Mobile Crane (250t)                             |
| H10-A2 | B           | B1113 (A1156) | RG: 188-210   |         | Bramford Substation |                  |               | HGVs              | Transformer Delivery AIL<br>Large Mobile Crane (250t) |
| H11-A1 | B           | B1113 (A1156) | JC: 1-6       |         |                     | RG-CC06          |               | HGVs              | Transformer Delivery AIL<br>Large Mobile Crane (250t) |
| H11-A2 | C           | A1214         | JC: 7-13      |         |                     |                  |               | HGVs              | Large Mobile Crane (250t)                             |

| PAR    | Section (s) | Road Access    | Tower Numbers | Cabling  | Substation/ CSEC | Cabling Compound   | Yard/Compound | Standard Vehicles | Most onerous anticipated AIL/Special Order Vehicles          |
|--------|-------------|----------------|---------------|--|------------------|--------------------|---------------|-------------------|--|
| H12-A1 | C           | A1214          | JC:14-28      |  |                  |                    |               | HGVs              | Large Mobile Crane (250t)                                    |
| H12-A2 | C           | B1070          | JC: 29-34     | Cabling between Raydon CSEC and B1070                  | Raydon CSEC      | JC-CC01<br>JC-CC02 |               | HGVs              | Cable Drum Delivery Vehicle<br><br>Large Mobile Crane (250t) |
| H13-A1 | C           | B1070          |               | Cabling between B1070 and River Stour                  |                  |                    |               | HGVs              | Cable Drum Delivery Vehicle<br><br>Large Mobile Crane (250t) |
| H14-A1 | D           | A12 (Ipswich)  |               | Cabling Between Black Brook and River Stour            |                  | JC-CC03            |               | HGVs              | Cable Drum Delivery Vehicle                                  |
| H15-A1 | D           | Birchwood Road |               | Cabling between Black Brook and A12 (0.5km)            |                  |                    |               | HGVs              | Cable Drum Delivery Vehicle                                  |
| H16-A1 | D           | Birchwood Road |               | Cabling between A12 and Great Eastern Main Line (GEML) |                  | JC-CC04            |               | HGVs              | Cable Drum Delivery Vehicle                                  |

| PAR    | Section (s) | Road Access      | Tower Numbers | Cabling                                  | Substation/ CSEC          | Cabling Compound              | Yard/Compound       | Standard Vehicles | Most onerous anticipated AIL/Special Order Vehicles                                  |
|--------|-------------|------------------|---------------|--|---------------------------|-------------------------------|---------------------|-------------------|--|
| H17-A2 | C           | Bentley Road     | TB: 1-8       | Cabling between GEML and EACN Substation | EACN Substation           | JC-CC05<br>JC-CC06            | Substation Compound | HGVs              | Transformer Delivery AIL<br>Cable Drum Delivery Vehicle<br>Large Mobile Crane (250t) |
| H18-A1 | C/D         | Wick Lane        | TB: 9-20      |  |                           |                               |                     | HGVs              | Large Mobile Crane (250t)  |
| H19-A1 | C/D         | Old Ipswich Road | TB: 21-29     |  |                           |                               |                     | HGVs              | Large Mobile Crane (250t)  |
| H19-A2 | D           | A1341/A134       | TB:30-34      | Cabling works east of A134               | Great Horkesley East CSEC | TB-CC01                       |                     | HGVs              | Cable Drum Delivery Vehicle<br>Large Mobile Crane (250t)                             |
| H20-A1 | D           | A1341/A134       |               | Cabling works west of A134               | Great Horkesley West CSEC | TB-CC02<br>TB-CC03<br>TB-CC04 |                     | HGVs              | Cable Drum Delivery Vehicle<br>Large Mobile Crane (250t)                             |
| H20-A2 | D           | A1124            | TB: 35-49     |  |                           |                               |                     | HGVs              | Large Mobile Crane (250t)  |
| H21-A1 | D           | A1124            | TB:50-51      |  |                           |                               |                     | HGVs              | Large Mobile Crane (250t)  |

| PAR    | Section (s) | Road Access    | Tower Numbers | Cabling                 | Substation/ CSEC             | Cabling Compound              | Yard/Compound | Standard Vehicles | Most onerous anticipated AIL/Special Order Vehicles          |
|--------|-------------|----------------|---------------|-------------------------|------------------------------|-------------------------------|---------------|-------------------|--|
| H22-A1 | D           | A1124          | TB: 52-59     |                         |                              |                               |               | HGVs              | Large Mobile Crane (250t)                                    |
| H23-A1 | D           | Great Tey Road | TB: 60-71     |                         |                              |                               | TB-Sate1      | HGVs              | Large Mobile Crane (250t)                                    |
| H24-A1 | E           | A120           | TB: 72-84     |                         |                              |                               |               | HGVs              | Large Mobile Crane (250t)                                    |
| H24-A2 | E           | B1018          | TB: 85-97     |                         |                              |                               |               | HGVs              | Large Mobile Crane (250t)                                    |
| H25-A1 | E           | Hartfield Road | TB:98-110     |                         |                              |                               |               | HGVs              | Large Mobile Crane (250t)                                    |
| H25-A2 | E/F         | A131           | TB: 111-132   | Fairstead Cabling Works | Fairstead CSEC east and west | TB-CC05<br>TB-CC06<br>TB-CC07 | TB-Main       | HGVs              | Cable Drum Delivery Vehicle<br><br>Large Mobile Crane (250t) |
| H26-A1 | E/F         | A131           | TB: 133-133   |                         |                              |                               |               | HGVs              | Large Mobile Crane (250t)                                    |
| H27-A1 | E/F         | A131           | TB:134-138    |                         |                              |                               |               | HGVs              | Large Mobile Crane (250t)                                    |
| H28-A1 | E/F         | A131           | TB: 139-148   |                         |                              |                               |               | HGVs              | Large Mobile Crane (250t)                                    |
| H28-A2 | F           | A1060          | TB: 149-159   |                         |                              |                               |               | HGVs              | Large Mobile Crane (250t)                                    |

| PAR    | Section (s) | Road Access | Tower Numbers | Cabling              | Substation/ CSEC | Cabling Compound | Yard/Compound | Standard Vehicles | Most onerous anticipated AIL/Special Order Vehicles |
|--------|-------------|-------------|---------------|----------------------|------------------|------------------|---------------|-------------------|---|
| H29-A1 | F           | A1060       | TB: 160-163   |                      |                  |                  |               | HGVs              | Large Mobile Crane (250t)                           |
| H29-A2 | F           | A414        | TB: 164-166   |                      |                  |                  |               | HGVs              | Large Mobile Crane (250t)                           |
| H30-A1 | F           | A414        | TB: 167- 175  |                      |                  |                  |               | HGVs              | Large Mobile Crane (250t)                           |
| H30-A2 | F/G         | B1002       | TB: 176-183   |                      |                  |                  |               | HGVs              | Large Mobile Crane (250t)                           |
| H31-A1 | F/G         | B1002       | TB: 184- 185  |                      |                  |                  |               | HGVs              | Large Mobile Crane (250t)                           |
| H32-A1 | F/G         | B1002       | TB: 186-201   |                      |                  |                  |               | HGVs              | Large Mobile Crane (250t)                           |
| H33-A1 | G           | A129/A176   | TB: 202-211   |                      |                  |                  | TB-Sate2A     | HGVs              | Large Mobile Crane (250t)                           |
| H33-A2 | G           | Dunton Road | TB: 212-221   |                      |                  |                  |               | HGVs              | Large Mobile Crane (250t)                           |
| H34-A1 | G           | West Mayne  | TB: 222-228   |                      |                  |                  | TB-Sat2B      | HGVs              | Large Mobile Crane (250t)                           |
| H35-A1 | H           | A128        | TB: 229—253   |                      |                  |                  |               | HGVs              | Large Mobile Crane (250t)                           |
| H36-A1 | H           | A1013       | TB: 254-263   | Cabling north of LTC | Tilbury CSEC     | TB-CC08          |               | HGVs              | Cable Drum Delivery Vehicle                         |

| PAR    | Section (s) | Road Access           | Tower Numbers | Cabling   | Substation/ CSEC   | Cabling Compound     | Yard/Compound       | Standard Vehicles | Most onerous anticipated AIL/Special Order Vehicles     |
|--------|-------------|-----------------------|---------------|---|--------------------|----------------------|---------------------|-------------------|---|
|        |             |                       |               |   |                    |                      |                     |                   | Large Mobile Crane (250t)                               |
| H37-A1 | H           | Fort Road             |               | Cabling between LTC and Rail Line                   |                    | TB-CC09<br>TB-CC010  |                     | HGVs              | Cable Drum Delivery Vehicle                             |
| H38-A1 | H           | Station Approach Road |               | Cabling between railway line and Tilbury Substation | Tilbury Substation | TB-CC011<br>TB-CC012 | Substation Compound | HGVs              | Cable Drum Delivery Vehicle<br>Transformer Delivery AIL |

\*If the Waveney Valley Alternative is taken forward, then an additional PAR will be required for Special Order Vehicle movements which is detailed on plans Norwich to Tilbury – Construction Access Plans – Section J AENC-NG-ENG-PLN-0030.

## Special Order Vehicle Movements

- 5.3.2 Construction traffic movements are proposed to include the operation of non-standard vehicles (vehicles that do not comply with the Road Vehicles (Construction and Use) Regulation 1986 (C&U) Regulations or the Road Vehicles (Authorised Weight) Regulations 1998 (AW Regs)). Non-standard vehicles are considered under these regulations to be vehicles (and their loads) that exceed 44 tonnes, have a width of more than 2.9 m, or a rigid length of more than 18.65 m.
- 5.3.3 Special Type General Orders (STGO) are a set of regulations which allow non-standard vehicles to be driven on UK Highways. STGO rules mean that a range of less common vehicles, whose design and use prevent compliance with the above regulations, may, in some circumstances, be used on public roads. Typical vehicle types anticipated to be operated under an STGO include the following:
- Abnormal Indivisible Loads (AILs) which cannot be divided into two or more loads for transportation by road.
  - Mobile cranes specifically built or adapted for lifting operations.
  - Engineering Machinery that are moveable and comprise of a motor vehicle or trailer specifically built for engineering operations.
- 5.3.4 Where an STGO applies to the Project, this will be undertaken in accordance with Government guidance transporting abnormal loads (Gov.UK, 2022). This is anticipated to require the use of escort vehicles. Full details for all notice periods are set out in the Special Types enforcement guide (Driver and Vehicle Standards Agency, May 2018).
- 5.3.5 National Highways, the relevant highway authorities and police will be notified of all the AIL routes and appropriate forms will be completed for AIL routeing. It is anticipated that this and the relevant documentation and authorisation would be completed through the Electronic Service Delivery for Abnormal Loads (ESDAL) system. When the response to each abnormal load movement order is received, the defined route agreed with National Highways, the relevant highway authorities and policy will be strictly followed.

## Special Order Vehicle Deliveries

- 5.3.6 Where PARs and Site Access Points are anticipated to be used by Special order Vehicles, specific considerations shall be made to determine suitable routeing and facilities to accommodate these movements. Infrastructure deliveries anticipated to require STGOs include:
- Shunt Reactors and Super Grid Transformers to substations at Bramford, EACN and Tilbury. It is assumed that the use of both private escort vehicles and a police escort will be required.
  - Cable Drums to Site Access Points for underground cabling sections. Traffic management and escort implications for cable drum deliveries are anticipated to vary. Discussions should be held with National Highways, the relevant highway authorities, and the police forces to confirm requirements once the number and date of AIL deliveries is clarified.
  - Mobile cranes and piling rigs for construction of pylon, temporary bridges, and substations. Whilst both the crane and the piling low-loader are anticipated to fall

within the criteria of the STGO regulations, these vehicles are not anticipated to require a police escort.

## Other Construction Vehicles

- 5.3.7 A range of other construction vehicles will be required on the Project that will use the public highway network. The majority of construction materials will be transported to the construction sites by HGVs. Traffic management will be developed to manage all construction movements. This will include Light Goods Vehicle (LGV), including vans, to deliver smaller items and the workers to the site. It will also include other HGV, such as low-loader units used to deliver larger items such as excavators, construction mats, and welfare units.
- 5.3.8 In accordance with measure GG24 in Appendix 4.1: Code of Construction Practice (CoCP), in Volume III of the PEIR, plant and construction vehicles (not including construction worker private vehicles) will conform to relevant applicable standards for the vehicle type which will be defined in the outline CoCP.
- 5.3.9 Vehicles will be correctly maintained and operated in accordance with manufacturer's recommendations and in a responsible manner. It is assumed that all plant and vehicles will switch off their engines when not in use and is safe to do so.

## 5.4 Construction Traffic

### General Construction Routeing Strategy

- 5.4.1 Construction traffic will be using the SRN and MRN to access the region. From the MRN (and SRN) construction traffic will be routed along a Primary Access Route (PAR) to the Site Access Points. From these Site Access Points; traffic will be routed off the public highway along Haul Roads to access the construction sites.
- 5.4.2 Access to the proposed overhead lines and underground cable alignment construction corridors is via the Haul Road, accessed from the PARs. The Haul Roads are proposed to be constructed adjacent to the underground cable corridor or to provide a continuous access route between overhead lines pylons.
- 5.4.3 The proposed Haul Road is only discontinuous at major obstructions along the underground cable and overhead line corridor such as major roads, railways, areas of environmental or historical significance and major watercourses. Each obstruction has been assessed on a case-by-case basis.
- 5.4.4 A number of Haul Roads are proposed to be provided in accordance with this strategy, serving the proposed transmission alignment and associated works.
- 5.4.5 The Haul Road is proposed to be used for construction movements and will generally be removed once the construction phase has been completed. The Haul Road arrangement as described above is considered to present a favourable solution for access as it offers the following benefits:
- Haul Roads enable the Project to move materials and the workforce along the overhead lines and underground cabling construction corridor minimising the use of public highways, avoiding (where possible) sensitive areas such as villages, schools and minor roads.

- The strategy reduces the number of construction related vehicles impacting the public highway network in the vicinity of the construction corridor.
- The strategy reduces the total number of construction routes (PARs) from the MRN to the construction corridor, and hence the quantum of local, rural roads impacted by the Project.
- The strategy reduces the number of Site Access Points on the public highway network, and therefore temporary junctions with the public highway.
- Longer Haul Roads enable a high percentage of construction traffic to be routed to the site predominantly via 'A' and 'B' roads, with reduced distances travelled via local, rural roads.
- The Haul Road reduces journey distances for site staff travelling between construction areas, accommodation, and compounds.

5.4.6 In some locations, overhead line construction corridors will require access from the underground cabling alignment corridors. In these locations, a Haul Road may be constructed adjacent and parallel to the underground cabling construction corridor to access the overhead lines. This would be provided to separate the overhead line construction vehicle movements from the works associated with the underground cable corridor construction. At Fairstead, the overhead line construction corridor, will be used to access the underground cable alignment.

5.4.7 A PAR has been identified for access to each section of Haul Road, with additional PARs proposed for longer sections of continuous Haul Road where appropriate roads for designation as a PAR have been identified. Generally, PARs are proposed to access each end of a Haul Road section, allowing construction traffic to enter the Haul Road at one end, travel along the Haul Road and exit the other end (if required). Dead-end Haul Roads have been avoided as far as practicable. However, due to site specific constraints, there are some instances of Haul Roads with only one PAR.

5.4.8 Secondary Access Routes (SARs) will be considered for specific movements of light vehicles (cars and vans) only moving between adjacent haul road sections, where the haul road is not continuous due to a river, main road, railway or other obstruction.

## HGV Deliveries

5.4.9 HGV movements will normally take place during the core working hours. Where required, vehicle movements for time critical activities (such as the joining of underground cables) may take place outside of the core working hours. It is anticipated that construction LGV/HGV/AIL vehicles will be scheduled to arrive throughout the core working hours. Where possible, construction worker LGV vehicles will arrive outside the traditional peak periods. (i.e., 08:00-09:00 and 17:00-18:00 Monday to Friday).

5.4.10 It is proposed the Main Works Contractor(s) implement a booking system to manage, where necessary and practicable, the spread of deliveries across the whole day to reduce the impact of HGV traffic during peak periods.

## Contingency Routes

5.4.11 There may be circumstances where traffic movements on the SRN and/or LRN are compromised, which will impact on the construction vehicles utilising the agreed PARs and Site Access Points. These circumstances are defined as one or more of the following:

- A traffic or other similar incident on the highway network that disrupts the normal operation of the highway network or results in the closure of the highway network
- A breakdown of a HGV enroute to the authorised access point
- Work requested to be completed out of hours by a third party such as the relevant highways authority /Network Rail
- Emergency health and safety incidents
- Planned or emergency highway works

5.4.12 In the event of any incident occurring which impacts on the safe and efficient operation of the road network, additional mitigation measures will be considered, which could include contingency routes. Contingency routes will be provided by pre-established traffic diversions and diversions as set out by National Highways, the relevant highway authorities and the police.

5.4.13 In addition, the Main Works Contractor(s) will utilise the website OneNetwork and liaise with National Highways/or the relevant local highway authority directly, to establish where pre-defined construction routes may be disrupted by other works or events. They will seek to establish alternative routes that, as far as practicable, are consistent with those set out above. Where required, the Main Works Contractor(s) will propose the estimated frequency of the use of the contingency routes, and share information with the Local Highway Authority.

## Construction Route Signage

5.4.14 All signage for temporary access to construction work sites will comply with relevant standards, including Traffic Signs Manual Chapter 8: Traffic Safety Measures and Signs for Road Works and Temporary Situations (Department for Transport and Highways Agency, 2009).

5.4.15 The following signage is proposed:

- **PAR and Site Access Point signs:** Temporary signage will be erected along construction routes on the LRN to provide access (directional) routing information. Temporary signage will be provided in the vicinity of each site access and crossover point which will provide warning to other road users of the likely presence of construction vehicles. Where appropriate, public roads that are not prescribed as PARs will be signed to indicate they are not to be used by construction traffic.
- **Haul Road Signs:** Similar to the above, temporary signage will be erected along the Haul Roads, within the working area where necessary. The signage will provide drivers with information on distances to destination, and warning (hazard) information relating to potential vehicle conflict or pedestrian conflict areas (crossover points of public highways and PRoWs).
- **Temporary diversion signs:** in the event that any diversions of traffic along the construction routes are required, temporary signage will be installed in accordance with relevant signage design guidance.

5.4.16 The Main Works Contractor(s) will undertake regular maintenance checks to report and rectify any defects with signage.

## 5.5 Site Access Points

- 5.5.1 Site Access Points have been assessed based on site specific constraints and highway safety considerations. The locations of the Site Access Points on the public highway are generally close to the underground cabling and overhead line construction corridors. The most suitable location for the proposed access point, and access to the Haul Roads, has been determined with consideration of road geometry, maximising junction visibility and other site-specific constraints. Locations have, where appropriate, been chosen to minimise the impact on trees and hedgerows. Existing land/field accesses have been used where they are considered to be suitable locations as determined by the above assessment criteria. When forming Site Access Points, connectivity for active travel users (footways and cycleways) will be preserved, where safe and practicable.
- 5.5.2 The Site Access Points layouts are designed to allow for two-way HGV movements to occur, whereby a HGV entering the junction can make the movement whilst a second HGV is waiting to exit the bellmouth.
- 5.5.3 Site Access Points have also been assessed through a swept path analysis for the largest vehicle associated with the Haul Road (i.e. a crane or alternative AIL). These vehicles require the full bellmouth carriageway to make the manoeuvre. This (infrequent) operation will take place with the appropriate Traffic Management in place.
- 5.5.4 Security fencing and gates are proposed for all Site Access Points to secure the works area, the construction corridor and Haul Roads. Security gates are to be set back a minimum of 20 m from the edge of the carriageway to allow for vehicles transitioning between the works area and public highway to stop outside of the gate whilst not impeding the public highway. A typical Site Access Point layout including tracking of construction vehicles, visibility splays and fencing arrangements can be found on Drawing AENC-NG-ENG-DWG-0002. In accordance with GG35 in Appendix 4.1: Code of Construction Practice (CoCP) in Volume III of the PEIR, working areas will be appropriately fenced.

## Crossover Points

- 5.5.5 In addition to Site Access Points, Haul Roads cross the public highway network at various locations. At major roads, the Haul Road is discontinuous. On other public roads, an 'at grade<sup>1</sup>' crossing of the public highway is proposed. Construction traffic is proposed to use these 'Crossover Points' to cross the public highway. No HGV construction traffic is proposed to use these crossover points to access the Haul Roads from the public highway under typical operation, and vice versa. Secondary Access Routes are being considered for specific movements for light vehicles moving between adjacent haul roads.
- 5.5.6 The Crossover Points have been designed to allow for emergency vehicles to access the Haul Road from the public highway. In emergency situations access for construction traffic will be possible at most crossover points.

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<sup>1</sup> At grade means the crossing is at the same height as the public highway, with no bridges.

- 5.5.7 In the event that a Haul Road is blocked, resulting in a site location becoming inaccessible from a Site Access Point, an alternative access shall be facilitated from a suitable Crossover Point.

## 5.6 Temporary Access Information

- 5.6.1 Haul Roads would typically be 8 m wide to allow for a two-way running track for construction vehicles. The typical cross section of the haul road would be 21 m wide, to allow for topsoil and subsoil storage, drainage and demarcation fencing. A standard detail showing the typical layout of the haul road is shown on drawing AENC-NG-ENG-DWG-0003.
- 5.6.2 For the assessment of haul road construction, it is currently assumed that topsoil (and some subsoil) would be stripped and aggregate (e.g. stone) placed on top of the soil, this would be delivered to site by HGVs. Further development of haul road construction, including consideration of bespoke construction methodologies, will be considered within the Environmental Statement based on site specific constraints and ground conditions.
- 5.6.3 For most Site Access Points, it is expected that some vegetation clearance and traffic management will be necessary for the duration that the access is operational.
- 5.6.4 The potential for Site Access Points to be made permanent as a legacy benefit has been considered within the siting of these facilities. Where deemed to be of potential benefit as a permanent facility, these will be promoted on a case-by-case basis and subject to agreement with the Local Highway Authority, and Persons with Interest in Land (PILs). This will typically include, alongside other criteria, a requirement for the facility to meet the relevant design standards once Temporary Traffic Management associated with the Project has been removed.
- 5.6.5 Speed limits will be enforced on all construction haul roads and access tracks. The speed limits are not defined at this stage of the Project and will vary depending upon site specific conditions. These will typically include limits up to a maximum speed of 20 mph.

## 5.7 Traffic Management

- 5.7.1 Traffic management, on the public highway and haul roads, where appropriate will be used where required to maintain public and/or workforce safety. This will primarily occur during construction and removal of access points, when erecting or dismantling scaffolding, where the underground cables cross the highway networks, for the safe operation of Site Access Points and Crossover Points, and potentially at locations on the PAR where mitigation measures are required. Other instances, than those detailed above, may arise where traffic management on the public highway and haul roads is required.
- 5.7.2 Traffic management will be provided in accordance with TSM Chapter 8, proportionate to the size of road, duration of works and volume of traffic. Traffic management measures may include temporary traffic signals or manned stop and go boards. In some instances, there will be the need for road closures, particularly on single track roads. Specific locations, timings and the specific traffic management measures will need to be agreed with the relevant highway authorities.

- 5.7.3 It is anticipated that roads would only be closed where this is required for safe working. In accordance with measure AS03 in Appendix 4.1: Code of Construction Practice (CoCP) in Volume III of the PEIR ,where practicable and safe to do so, existing access to and from residential, commercial, community and agricultural land uses will be maintained throughout the construction period, or as agreed through landowner discussions. This may require signed diversions or temporary restrictions to access. Where this is not practicable, alternative arrangements will be made with the affected parties through the land agreements, such as instances of no through route single track roads where works are required. Where practicable and safe to do so, cyclists and pedestrians will be able to continue to use the closed roads.
- 5.7.4 Where diversions are necessary, they will adopt the principle that they will use the same standard of road, or higher where practicable and available. However final agreement on the most suitable diversion route is anticipated to form part of the Traffic Management Plan. A full point-to-point diversion will be provided so that all vehicles that will usually and legitimately use a road can continue to use it to complete their journey. The means of access will be communicated to the relevant highway authorities, emergency and essential services.

## Access and Crossover Points

- 5.7.5 Traffic management will be required during the construction of the proposed Site Access Points and Crossover Points for the safety of road users. The DCO Plans will show the proposed traffic management measures associated with Access Points. Traffic management will vary dependant on site specific requirements, but may typically include:
- Temporary traffic light systems (and/or stop and go boards) to control flows during construction of Site Access Points and Crossover Points to allow single lane working where roads are of suitable width.
  - Further use of temporary traffic light systems during periods of peak construction traffic flows to control turning/crossing movements at Public Highway interfaces.
  - Temporary speed limit restrictions in the vicinity of proposed access and crossing points. This will be completed in combination with other measures including vegetation clearance to achieve the relevant visibility requirements.
- 5.7.6 It is anticipated that for the construction of access and crossover points on single track roads these would be closed during construction. It is anticipated that Site Access Points onto larger roads would be undertaken using temporary traffic management measures. Where required, suitable alternative means of access will be provided.
- 5.7.7 Access controlled measures such as fencing and gated accesses to working areas will typically be in place for safety and security. Access and crossover points will be designed to reduce highway safety risks and congestion on the public highway by providing for the safe and efficient passage of construction traffic.

## 5.8 Bus Stops and Routes

- 5.8.1 Where a bus stop is required to be closed during construction, through discussions with the relevant highway authority and the bus operators, these will be relocated. A temporary stop will be provided, where a suitable location can be found.

## 5.9 Pedestrians and Other Road Users

- 5.9.1 Local communities will be informed during construction period through letter drops and local signage. Mitigation measures will be developed to manage the impact on pedestrians and other road users throughout construction, based on the number and type of construction vehicles using the route and users of the public highway. This may involve providing signage to advise of alternative footways and cycleways that can be used during construction (as far as is practical). A draft Public Rights of Way (PRoW) management strategy has been developed to provide information on the temporary diversions and closures that could be employed by the Main Works Contractor(s) to manage the impact upon users of the PRoW and to maintain public safety during the construction period. The PRoW management strategy is included as an Annex to Appendix 4.1: Draft Outline Code of Construction Practice, in Volume III of the PEIR.

# 6. Staff Travel

## 6.1 Introduction

- 6.1.1 This chapter sets out the measures that should be in place to encourage sustainable transportation for the workforce, in a way which reduces both environmental and social impacts on the local area. In accordance with measure AQ1, T10, and GG10 in Appendix 4.1: Draft Outline Code of Construction Practice (CoCP) in Volume III of the PEIR, an Outline Staff Travel Plan will be developed for DCO Submission, to support sustainable travel for construction staff.
- 6.1.2 The objective of managing staff travel is to encourage a reduction in quantity of single occupancy trips and to create a shift towards more sustainable transport modes.

## 6.2 Workforce

- 6.2.1 The majority of the workforce will be split into mobile gangs. Whilst it is anticipated that these gangs will travel to a construction compound, in their private vehicles, they will be encouraged to travel in vehicles of multiple occupancy from their accommodation. From the construction compound, the staff will travel to work sites in multiple occupancy vehicles wherever possible.

## 6.3 Management Plan

- 6.3.1 A travel information pack, prepared by the Main Works Contractors(s) will be issued to all staff as part of their induction to the Project, alongside the information in Section 3.2. This should include:
- Information on public transport information, including bus stops, destinations and timetables;
  - Details of local rail stations including routes and destinations served;
  - A map showing local cycle routes, which also includes details on location of cycle parking and shops within the local areas; and
  - Details of any local taxi numbers.
- 6.3.2 It is anticipated that the Main Works Contractor(s) will promote car sharing amongst their employees and suppliers and assist where necessary. This could include the provision of minibuses to transport staff between accommodation, compounds and work sites.
- 6.3.3 Vehicles travelling to and from sites will use the Primary Access Routes to access the compounds, in line with other construction vehicle movements.

# 7. Implementation

## 7.1 Implementation of the CTMP

- 7.1.1 National Grid will put in place robust procedures to inform and supervise all personnel working on the Project. This includes contractual requirements on the Main Works Contractor(s), to enforce control measures set out within the CTMP are adopted when undertaking the construction of works authorised by the DCO. The Main Works Contractor(s) will be responsible for implementing these control measures.
- 7.1.2 It is the Main Works Contractor(s) responsibility to brief all operatives on the specific details within the CTMP prior to the commencement of works. The briefings should be delivered by a suitably trained member of the team, such as the site supervisor, Construction Manager or Environmental Manager.

## 7.2 Site Checks and Reporting

- 7.2.1 The Main Works Contractor(s) will undertake pre-site condition surveys as part of the site setup, as described in Section 5.2. This should include making a record of the condition of existing features such as public highway, tracks and PRow. Post site conditions surveys should be undertaken after construction and the results of these and any remediation, will be discussed with the landowner and where applicable, the relevant highway authorities, prior to handover.
- 7.2.2 Regular site checks are requested to be carried out across the Project to monitor compliance with the CTMP. The programme of site inspections is controlled by the Environmental Manager who will draw on appropriate suitable experience specialists for specific tasks. The overarching inspections are summarised below in Table 7.1. Appropriate action will be taken should any incidents of non-conformance with the CTMP be found during inspection.
- 7.2.3 Site checks and inspections should include checks against compliance with measures detailed in Appendix 4.1: Draft Outline Code of Construction Practice (CoCP) in Volume III of the PEIR and other commitments made by the Project.

Table 7.1 – Anticipated Site Checks Relevant to the CTMP

| Inspection Type           | Purpose  | Who                             | Frequency |
|---------------------------|--|---------------------------------|-----------|
| Environmental Inspections | To monitor compliance with Project commitments and the environmental standards.<br><br>To raise adherence to good practice commitments and raise actions where concerns are identified.<br><br>To check mitigation measures for sensitive features are in place. | Environmental Managers (EnvCoW) | Weekly    |

|   |  |                   |                                     |
|---|--|-------------------|-------------------------------------|
| Site Checks                             | To ensure that working practices are carried out in accordance with approved methods, standards and good practice commitments. These should also check compliance with requirements agreed in any applicable permit. | Works Supervisors | Daily Visual Check in working area  |
| Environmental Observations              | Allows all staff to raise concerns or good practice ideas to safeguard continual improvement and innovation.   | All Staff         | As Required                         |
| Monitoring of vehicles and road network | Checking signage is in place. Monitoring of vehicle condition and use of agreed construction routes.   | EnvCoW(s)         | Weekly                              |
| Monitoring of PRow Routes               | Checking signage is in place and checking condition of PRow within the Order Limits.   | EnvCoW(s)         | Daily Visual Check in working area. |

- 7.2.4 The results of inspections are required to be recorded in an Environmental Log. Findings should be disseminated to the wider construction team as appropriate and additional procedures put in place if required. These findings should be shared with the local highway authority, as and when incidents of non-conformance are reported.
- 7.2.5 The Main Works Contractor(s) should implement a monitoring and reporting system to check compliance with the measures set out within the CTMP. This may include the need for a GPS tracking system to be fitted to HGV owned and operated by the Main Works Contractor(s) to check for compliance with authorised construction routes. Automatic Number Plate Recognition (ANPR) may also be utilised for monitoring compliance, however these can be difficult to implement across all vehicles for the Project.
- 7.2.6 The Main Works Contractor(s) will also be expected to monitor the number of construction vehicles between the sites and the SRN.

## Site Vehicle Movements to Site

- 7.2.7 It is proposed that the Main Works Contractor(s) and National Grid prepare documentation to implement the strategies set out in Section 5.4 to manage construction related movements to and from site. This may include the following:
- Implement a delivery management system including a delivery booking in system.
  - Implement a Construction Employee Management Plan.
  - Construction Environmental Management Plan.

## Site Safety

- 7.2.8 The Main Works Contractor(s) will set out their methods for recording and monitoring the following safety related issues:
- Record of all logistics-related accidents.
  - Modes of transport staff use to travel to site.
  - Vehicles and operations not meeting safety requirements.
  - Description of the Main Works Contractor(s) handbook.
  - Description of the driver information pack.

## 7.3 Non-Compliance Procedure

- 7.3.1 The EnvCoW(s) will generally be responsible for undertaking site audits to check compliance with the CTMP. All incidents associated with the construction of the Project, including environmental incidents and non-conformance with the CTMP, will be reported by the EnvCoW(s). Where a breach or complaint is reported, the Main Works Contractor(s) and/or National Grid will carry out an investigation in order to identify appropriate corrective actions. Where needed, corrective actions will be agreed with the relevant local highway authority and/or community members prior to implementation.
- 7.3.2 Data recorded from the non-compliance procedure above will be collated on a quarterly bases by National Grid and the Main Works Contractor(s) and will be issued out to the relevant parties, including Local Highway Authorities.

## 7.4 Community Liaison

- 7.4.1 In accordance with mitigation measure GG25 in Appendix 4.1 Draft Outline Code of Construction Practice (CoCP), in Volume III of the PEIR, members of the community and local businesses will be kept informed regularly of the works through active community liaison. Information on the role and remit of the community liaison will be included in a future iteration of the CTMP but is anticipated to include:
- Notification of heavy traffic periods.
  - Start and end dates of phasing.
  - A contact number to be provided to members of the public to raise concerns or complaints about the Project.

## 7.5 Complaints Procedure

- 7.5.1 The complaints procedure will be developed and details outlined in a future iteration of the CTMP.

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